

(English translation of original PCT claims)

### Claims

1. Method of making an outer lever (1) of a finger lever (2) that can be switched to different lifts for at least one gas exchange valve, said outer lever (1) comprising two substantially parallel arms (4, 5) whose ends (6, 7) are connected by crossbars (8, 9) so that a rectangular or O-like aperture (10) for an inner lever (11) that is capable of pivoting relative to the outer lever (1) is formed, a running contact surface (14, 15) for a high-lift cam being arranged on an upper side (12, 13) of each arm (4, 5), said method **being characterized by** following work steps to which further intermediate steps may be added:
  - e) deep drawing a cup-shaped base body (16) out of a metal sheet or a sheet metal strip such that, on the one hand, a drawing die is applied to the metal sheet or the sheet metal strip from one side of upper sides (12, 13; 17, 18) of the arms (4, 5) and crossbars (8, 9) to be formed and produces the substantial height of the arms (4, 5) and the crossbars (8, 9) in the cup-shaped base body (16) and, on the other hand, a continuous annular collar (19) comprising the upper sides (12, 13; 17, 18) extends outwards approximately at right angles to the base body (16);
  - f) simultaneous or subsequent shaping, typically stamping of an approximately central cavity (20) extending in length direction of the lever in an underside (21) of one of the crossbars (8 or 9);
  - g) punching-out a bottom (22) of the cup-shaped base body (16), and

- h) cutting-off the continuous annular collar (19) on the upper sides (12, 13; 17, 18) except for at least two elongate opposing projecting portions on the arms (4, 5) for forming the running contact surfaces (14, 15).
- 2. Method according to claim 1, **characterized in that** the annular collar (19) is cut off in step d) such that, in addition to the running contact surfaces (14, 15) on the arms (4, 5), a finger-like extension (23) remains on the crossbar (8 or 9) comprising the cavity (20), which extension (23) extends longitudinally away from the crossbar and is subsequently bent over so as to project from the upper side (17 or 18) of the crossbar (8 or 9).
- 3. Method according to claim 1, **characterized in that** the annular collar (19) is cut off in step d) such that outer surfaces ((24, 25, 26, 27) of the arms (4, 5) and the crossbars (8, 9) merge directly or approximately directly into the upper sides (12, 13; 17, 18).
- 4. Method according to claim 1, **characterized in that** the cavity (20) of step b) is partially cylindrical in shape.
- 5. Method according to claim 1, **characterized in that** the running contact surfaces (14, 15) made in step d) have a beam-like geometry and, as viewed in longitudinal direction, a slightly cylindrical shape.
- 6. Method according to claim 1 or 5, **characterized in that** the running contact surfaces (14, 15) made in step d) extend approximately at a center of the arms (4, 5).
- 7. Method according to claim 2, **characterized in that** step d) is followed by a further step e) in which two aligned receptions (28, 29) are punched or bored into the arms (4, 5) in the vicinity of the crossbar (9 or 8)) that is opposed to the crossbar (8 or 9) comprising the finger-like extension (23), and said

receptions (28, 29) serve to receive an axle for the pivoted mounting of the inner lever relative to the outer lever (1).

8. Method according to claim 1, **characterized in that** the running contact surface (14, 15) on each arm (4, 5) of the outer lever is intended for a contact with a high-lift cam.